

VI. CLAIMS

We claim:

- 5 1. A composition, comprising:
- a. a carrier;
 - b. a plurality of capsules entrained in said carrier, wherein each of said capsules contain a material, and wherein said each of said capsules has a capsule wall
10 with adjustable capsule rupture characteristics to vary delay of release of said material; and
 - c. a perceivable sensorial indicia generated by release of said material from said capsules coordinated with occurrence of a discrete event.
- 15 2. A composition as described in claim 1, wherein said plurality of capsules comprise a plurality of aqueous soluble capsules.
3. A composition as described in claim 1, wherein said plurality of capsules comprise a plurality of non-aqueous soluble capsules.
- 20 4. A composition as described in claim 2, wherein said carrier comprises a mixture of polyethylene glycol, tridecyl polyoxyethylene ethanol, nonyl phenol polyoxyethylene ethanol, and phenolphthalein.
- 25 5. A composition as described in claim 4, wherein said carrier comprises a mixture of about 100 parts polyethylene glycol, about 15 parts tridecyl polyoxyethylene ethanol, about 5 parts nonyl phenol polyoxyethylene ethanol, and about 0.06 parts of a 1% (w/v) solution of phenolphthalein.
- 30 6. A composition as described in claim 3, wherein said carrier comprises a mixture of glycerin, tridecyl polyoxyethylene ethanol, dodecyl phenol polyoxyethylene ethanol, and phenolphthalein.
7. A composition as described in claim 6, wherein said carrier comprises a mixture
35 of about 150 parts glycerin, about 18 parts tridecyl polyoxyethylene ethanol, about 10 parts

dodecyl phenol polyoxyethylene ethanol, and about 0.08 parts of a 1% (w/v) solution of phenolphthalein.

8. A composition as described in claim 3, wherein said carrier comprises a mixture
5 of water, sodium xylene sulfonate, sodium toluene sulfonate, dodecylbenzene sulfonate, dodecyl phenol polyoxyethylene ethanol, and polyacrylamide.
9. A composition as described in claim 2, wherein said capsules are formed from a
fully hydrolyzed polyvinyl alcohol.
10. A composition as described in claim 9, wherein said fully hydrolyzed polyvinyl
alcohol comprises Celvol 107.
11. A composition as described in claim 3, wherein said capsules are formed from
15 vinylidene chloride-methyl acrylate copolymer.
12. A composition as described in claim 11, wherein said vinylidene chloride-methyl
acrylate copolymer comprises Daran 159 Latex.
- 20 13. A composition as described in claim 1, wherein said plurality of capsules
comprise a plurality of non-aqueous soluble capsules.
14. A composition as described in claim 13, wherein said capsules are formed from
polyvinyl acetate.
- 25 15. A composition as described in claim 1, wherein said plurality of capsules
comprise a plurality of non-aqueous soluble capsules.
16. A composition as described in claim 15, wherein said capsules are formed from
30 gelatin hardened with glutaraldehyde.
17. A composition as described in claim 1, wherein said capsules are formed from a
capsule substance selected from the group consisting of a urea-formaldehyde, a gelatin, a
polyvinyl alcohol, a polyvinyl acetate, a fully hydrolyzed polyvinyl alcohol, a Celvol

107, a vinylidene chloride-methyl acrylate copolymer, a Daran 159 Latex, a polyvinyl pyrrolidone, a polyvinyl methyl ether, a polyvinyl emthyl ether/maleic anyhydride colpolymer, a carboxy methyl cellulose, a hydroxy ethyl cellulose, a cellulose acetate butyrate, a cellulose acetate propionate, and a polyvinyl alcohol/acetyl copolymer

5

18. A composition as described in claims 2, 3, 4, or 5, wherein said material within said capsules comprises trisodium phosphate.

19. A composition as described in claim 18, wherein said trisodium phosphate comprises trisodium phosphate particles between about 40 microns and about 180 microns.

20. A composition as described in claim 18, wherein said trisodium phosphate comprises trisodium phosphate particles between about 55 microns and 180 microns.

15

21. A composition as described in claim 18, wherein said trisodium phosphate comprises trisodium phosphate particles between about 40 microns and 55 microns.

22. A composition as described in claim 18, wherein said trisodium phosphate particles are fluid bed coated to form said capsules.

20

23. A composition as described in claim 22, wherein capsules walls have a thickness of between about 15 microns and about 50 microns.

24. A composition as described in claim 2, wherein said capsules have a range of size of between about 55 microns to about 240 microns.

25

25. A composition as described in claim 6, wherein said material within said capsules comprises a sugar particle having a dye coat.

30

26. A composition as described in claim 25, wherein said dye coat comprises blue dye #7.

27. A composition as described in claim 25, wherein said sugar particle has a size of between about 75 microns to about 125 microns.
28. A composition as described in claim 25, wherein said sugar particle has a size of about 100 microns.
- 5 29. A composition as described in claims 27 or 28, wherein said dye coat has a thickness of between about 15 microns and about 30 microns.
- 10 30. A composition as described in claims 27 or 28, wherein said dye coat has a thickness of about 25 microns.
31. A composition as described in claim 16, wherein said material within said capsules comprises and oil.
- 15 32. A composition as described in claim 31, wherein said oil comprises oil of wintergreen.
33. A composition as described in claim 31, wherein said oil comprise methyl salicylate.
- 20 34. A composition as described in claims 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, or 14, wherein said composition comprises a cleaning agent.
35. A composition as described in claim 34, wherein capsule rupture characteristics are altered by capsule wall thickness.
- 25 36. A composition as described in claim 35, wherein capsule rupture characteristics are altered by capsule size.
- 30 37. A composition as described in claim 34, wherein capsule rupture characteristics are altered by capsule size.
38. A composition as described in claim 37, wherein capsule rupture characteristics are altered by capsule wall thickness.

39. A composition as described in claim 34, wherein capsule rupture characteristics are adjusted to provide delayed release of said material in response to application force characteristics.
- 5
40. A composition as described in claim 35, wherein capsule wall thickness is between about 10 microns and about 30 microns.
41. A composition as described in claim 35, wherein capsule size is between about 60
10 microns and about 240 microns.
42. A composition as described in claims 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, or 14, wherein said composition comprises a hand washing agent.
- 15 43. A composition as described in claim 42, wherein capsule rupture characteristics are altered by capsule wall thickness.
44. A composition as described in claim 43, wherein capsule rupture characteristics are altered by capsule size.
- 20 45. A composition as described in claim 42, wherein capsule rupture characteristics are altered by capsule size.
46. A composition as described in claim 45, wherein capsule rupture characteristics
25 are altered by capsule wall thickness.
47. A composition as described in claim 42, wherein capsule rupture characteristics are adjusted to delay release of said material in response to application force characteristics.
- 30 48. A composition as described in claim 47, wherein capsule rupture characteristics of said capsules are adjusted to release said material between about 5 seconds and about 30 seconds after commencement of a hand washing event.

49. A composition as described in claim 47, wherein capsule rupture characteristics of said capsules are adjusted to release of said material between about 5 seconds and about 15 seconds after commencement of a hand washing event.
- 5 50. A composition as described in claim 45, wherein said capsules are greater than about 100 microns in size.
51. A composition as described in claim 45, wherein said capsules are less than about 100 microns in size.
- 10 52. A composition as described in claim 42, wherein said perceivable sensorial indicia comprises color change of said carrier.
53. A composition as described in claim 52, wherein said discrete event comprises
15 achievement of a therapeutic hand wash event.
54. A composition as described in claim 52, wherein said discrete event comprises elapse of a hand wash event of pre-determined duration.
- 20 55. A composition as described in claim 52, wherein said discrete event comprises elapse of a hand wash event having duration of time selected from the group of: between about 5 seconds and about 10 seconds, between about 6 seconds and 11 seconds, between about 7 seconds and about 12 seconds, between about 8 seconds and about 13 seconds, between about 10 seconds and about 14 seconds, between about 11 seconds and about 15
25 seconds, about 5 seconds, about 6 seconds, about 7 seconds, about 8 seconds, about 9 seconds, about 10 seconds, about 11 seconds, about 12 seconds, about 13 seconds, about 14 seconds, about 15 seconds.
56. A composition, comprising:
30 a. a non-aqueous carrier;
b. a plurality of capsules stable in said non-aqueous carrier, wherein said capsules contain a material, and wherein said capsules have aqueous activated capsule rupture characteristics adjusted to coordinate release of said material with occurrence of a discrete event; and

- c. a sensorial indicia perceivable after release of said material from said capsules.
- 5 57. A composition, comprising:
- a. a carrier;
 - b. a plurality of capsules entrained in said carrier;
 - c. a material contained within said capsules, wherein said capsules have adjustable capsule rupture characteristics to delay release of said material; and
 - 10 d. a sensorial indicia perceivable after release of said material from said capsules.
58. A method of washing hands, comprising the steps of:
- a. sequestering a material in a plurality of capsules;
 - 15 b. conveying said plurality of capsules in a hand washing agent to a surface of at least one hand;
 - c. commencing hand washing, wherein hand washing applies hand washing forces to said capsules;
 - d. rupturing a portion of said plurality of said capsules in response to said hand washing forces;
 - 20 e. releasing said material into said hand washing agent; and
 - f. generating a perceivable sensorial indicia of completion of said hand washing with said hand washing agent.
- 25 59. A method of washing hands, comprising the steps of:
- a. sequestering a material in a plurality of capsules;
 - b. conveying said plurality of capsules in a hand washing agent to a surface of at least one hand;
 - c. commencing hand washing, wherein hand washing mixes said hand washing agent with water;
 - 30 d. solubilizing a portion of said plurality of said capsules with said water;
 - e. releasing said material into said hand washing agent; and
 - f. generating a perceivable sensorial indicia of completion of said hand washing with said hand washing agent.

60. A method of washing hands as described in claims 58 or 59, wherein said step of generating a perceivable sensorial indicia at completion of said hand washing with said hand washing agent comprises the step changing color of said hand washing agent at completion of said hand washing with said hand washing agent.

5

61. A method of washing hands as described in claim 60, wherein said step changing color of said hand washing agent at completion of said hand washing with said hand washing agent comprises the step of providing a color change material in said hand washing agent responsive to said material sequestered in said capsules.

10

62. A method of washing hands as described in claim 61, wherein said hand washing agent contains an amount of phenolphthalein and said material sequestered in said capsules comprises trisodium phosphate.

15

20